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## (54) MANUFACTURE OF THIN FILM TRANSISTOR

## (57) Abstract:

**PURPOSE:** To provide the manufacturing method, of a thin-film transistor, wherein an organic coating film which contains at least a dopant and an organic solvent is used and a large area can be achieved easily at a low process temperature.

**CONSTITUTION:** As shown in (a), an amorphous semiconductor film and an insulating film 3 are formed on a light-transmitting substrate 1. Then, as shown in (b), a gate electrode 4 is formed; the insulating film 3 is removed so as to become the shape of the gate electrode 4. Then, as shown in (c), an organic coating film 5 which contains a dopant is formed; after that, the rear side of the substrate is irradiated with an energy beam. Lastly, as shown in (d), the organic coating film 5 is removed selectively; a source electrode and a drain electrode 7 are formed. Thereby, a polycrystalline thin-film transistor is obtained.

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